

Attorney Docket No. STRI-039

APPLICATION

FOR UNITED STATES LETTERS PATENT

SPECIFICATION

18 TO ALL WHOM IT MAY CONCERN:

19

20 BE IT KNOWN THAT I, **Charles D. Black**, a citizen of the United States, have
21 invented a new and useful material dispenser system of which the following is a
22 specification:

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2

3 **Material Dispenser System**

4

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6 **CROSS REFERENCE TO RELATED APPLICATIONS**

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8 I hereby claim benefit under Title 35, United States Code, Section 119(e) of
9 United States provisional patent application Serial Number 60/436,483 filed
10 December 24, 2002 which is still pending. I hereby claim benefit under Title 35,
11 United States Code, Section 120 of United States patent application Serial Number
12 09/996,666 filed November 28, 2001. This application is a continuation-in-part of the
13 09/996,666 application. The 09/996,666 application is currently pending. The
14 09/996,666 application and the 60/436,483 application are hereby incorporated by
15 reference into this application.

16

17 **STATEMENT REGARDING FEDERALLY**
18 **SPONSORED RESEARCH OR DEVELOPMENT**

19

20 Not applicable to this application.

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23 **BACKGROUND OF THE INVENTION**

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27 **Field of the Invention**

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29 The present invention relates generally to elongate material dispensers and
30 more specifically it relates to a material dispenser system for allowing convenient
31 unloading, loading and dispensing of a spool of elongate material.

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2

3 **Description of the Related Art**

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5 Elongate material dispensers have been in use for years. Conventional elongate
6 materially dispensers are formed for receiving and dispensing a spool of material such
7 as barricade tape, flagging tape, string, rope, wire and other elongate materials. The
8 BEN MEADOWS COMPANY manufactures a barricade tape dispenser that is comprised
9 of a complex structure which is difficult to load and unload a spool of material. There are
10 other products on the market that receive and dispense elongate material upon a spool, but
11 they are relatively difficult to load and unload.

12

13 While these devices may be suitable for the particular purpose to which they
14 address, they are not as suitable for allowing convenient unloading, loading and
15 dispensing of a spool of elongate material. Conventional material dispensing devices
16 are difficult to load and unload with a spool of material.

17

18 In these respects, the material dispenser system according to the present
19 invention substantially departs from the conventional concepts and designs of the prior
20 art, and in so doing provides an apparatus primarily developed for the purpose of
21 allowing convenient unloading, loading and dispensing of a spool of elongate material.

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2 **BRIEF SUMMARY OF THE INVENTION**

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4 In view of the foregoing disadvantages inherent in the known types of elongate
5 material dispensers now present in the prior art, the present invention provides a new
6 material dispenser system construction wherein the same can be utilized for allowing
7 convenient unloading, loading and dispensing of a spool of elongate material.

8

9 The general purpose of the present invention, which will be described
10 subsequently in greater detail, is to provide a new material dispenser system that has
11 many of the advantages of the elongate material dispensers mentioned heretofore and
12 many novel features that result in a new material dispenser system which is not
13 anticipated, rendered obvious, suggested, or even implied by any of the prior art
14 elongate material dispensers, either alone or in any combination thereof.

15

16 To attain this, the present invention generally comprises a plurality of prongs
17 formed for rotatably receiving a spool of material, a main body receiving the prongs,
18 and a handle attached to the main body. The prongs are comprised of a resilient
19 material for allowing the distal portions thereof to be forcibly contracted thereby
20 allowing the spool of material to be unloaded and a replacement spool to be loaded.
21 The prongs each have a flanged portion that extends outwardly thereby retaining the
22 spool positioned upon the prongs.

23

24 There has thus been outlined, rather broadly, the more important features of the
25 invention in order that the detailed description thereof may be better understood, and
26 in order that the present contribution to the art may be better appreciated. There are
27 additional features of the invention that will be described hereinafter and that will form
28 the subject matter of the claims appended hereto.

29

1 In this respect, before explaining at least one embodiment of the invention in
2 detail, it is to be understood that the invention is not limited in its application to the
3 details of construction and to the arrangements of the components set forth in the
4 following description or illustrated in the drawings. The invention is capable of other
5 embodiments and of being practiced and carried out in various ways. Also, it is to be
6 understood that the phraseology and terminology employed herein are for the purpose
7 of the description and should not be regarded as limiting.

8

9 A primary object of the present invention is to provide a material dispenser
10 system that will overcome the shortcomings of the prior art devices.

11

12 A second object is to provide a material dispenser system for allowing
13 convenient unloading, loading and dispensing of a spool of elongate material.

14

15 A second object is to provide a material dispenser system for allowing efficient
16 replacement of a spool of elongate material.

17

18 Another object is to provide a material dispenser system that is easy to load and
19 unload a spool of material.

20

21 An additional object is to provide a material dispenser system that may be
22 utilized with spools of material such as but not limited to barricade tape, flagging tape,
23 string, rope, wire and other elongate materials.

24

25 A further object is to provide a material dispenser system that is ergonomic
26 thereby reducing stress upon the user's fingers and wrist during usage.

27

28 Another object is to provide a material dispenser system that allows a user to
29 easily sever a desired length of the elongate material.

1

2 Other objects and advantages of the present invention will become obvious to the
3 reader and it is intended that these objects and advantages are within the scope of the
4 present invention.

5

6 To the accomplishment of the above and related objects, this invention may be
7 embodied in the form illustrated in the accompanying drawings, attention being called
8 to the fact, however, that the drawings are illustrative only, and that changes may be
9 made in the specific construction illustrated and described within the scope of the
10 appended claims.

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BRIEF DESCRIPTION OF THE DRAWINGS

3

4 Various other objects, features and attendant advantages of the present
5 invention will become fully appreciated as the same becomes better understood when
6 considered in conjunction with the accompanying drawings, in which like reference
7 characters designate the same or similar parts throughout the several views, and
8 wherein:

9

10 FIG. 1 is an upper perspective view of the present invention.

11

12 FIG. 2 is an exploded upper perspective view of the present invention.

13

14 FIG. 3 is an upper perspective view of the present invention with a spool of
15 elongate material.

16

17 FIG. 4 is an upper perspective view of the present invention with another type
18 of spool.

19

20 FIG. 5 is a side view of the present invention.

21

22 FIG. 6 is an upper perspective view of the prongs.

23

24 FIG. 7 is a top view of the present invention.

25

26 FIG. 8 is an exploded upper perspective view of a first alternative embodiment
27 of the present invention.

28

29 FIG. 9 is a side view of the first alternative embodiment.

1
2 FIG. 10 is a top view of the first alternative embodiment.
3

4 FIG. 11 is an exploded side cutaway view of the first alternative embodiment.
5

6 FIG. 12 is a cutaway side view of the first alternative embodiment.
7

8 FIG. 13 is a top view of the prongs for the first alternative embodiment.
9

10 FIG. 14 is an upper perspective view of a second alternative embodiment.
11

12 FIG. 15 is an upper perspective view of the second alternative embodiment with
13 a spool positioned upon the prongs.
14

15 FIG. 16 is an upper perspective view of the main embodiment illustrating the
16 spool partially positioned upon the prongs.
17

18 FIG. 17 is an upper perspective view of the main embodiment illustrating the
19 spool partially positioned upon the prongs.
20

1

DETAILED DESCRIPTION OF THE INVENTION

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4 Turning now descriptively to the drawings, in which similar reference
5 characters denote similar elements throughout the several views, FIGS. 1 through 17
6 illustrate a material dispenser system **10**, which comprises a plurality of prongs **50**
7 formed for rotatably receiving a spool **12** of material, a main body **20** receiving the
8 prongs **50**, and a handle **40** attached to the main body **20**. The prongs **50** are
9 comprised of a resilient material for allowing the distal portions thereof to be forcibly
10 contracted thereby allowing the spool **12** of material to be unloaded and a replacement
11 spool **12** to be loaded. The prongs **50** each have a flanged portion that extends
12 outwardly thereby retaining the spool **12** positioned upon the prongs **50**.

13

14 Figures 2 and 5 best illustrate the main body **20** preferably having a U-shaped
15 structure. The main body **20** preferably has a horizontal main slot **22**, however the
16 main slot **22** may also be orientated in a vertical manner. The main body **20** preferably
17 includes a pair of opposing catch members **24** that extend outwardly that are catchably
18 engaged by the engaging nubs **58** of the prongs **50** as shown in Figure 2 of the
19 drawings.

20

21 As shown in Figures 1, 2 and 5 of the drawings, a support member **30** extends
22 from the main body **20**. The support member **30** preferably extends substantially
23 transversely with respect to the main body **20** as best shown in Figure 5 of the
24 drawings. At least one cutting edge **32** preferably extends from the support member **30**
25 as best shown in Figure 5 of the drawings. The cutting edge **32** may be comprised of a
26 plurality of blades or similar cutting structure capable of cutting the material upon the
27 spool **12**.

28

1 A handle **40** is preferably attached transversely to the distal end of the support
2 member **30** opposite of the main body **20** as best shown in Figure 5 of the drawings.
3 The handle **40** preferably extends outwardly substantially parallel with respect to the
4 main body **20** as further shown in Figure 5 of the drawings. The handle **40** may have
5 various ergonomic configurations for grasping by a user during loading, unloading,
6 transporting and dispensing of elongate material from a spool **12**.

7

8 As shown in Figures 2 and 7 of the drawings, the prongs **50** are preferably
9 comprised of a base, and a first prong **52** and a second prong **54** extending from the base in
10 a resilient manner and forming a U-shaped structure. The prongs **50** preferably include a
11 first prong **52** and a second prong **54**, however, it can be appreciated that additional prongs
12 **50** may extend from the base. The prongs **50** are preferably comprised of a resilient
13 material such as but not limited to plastic or composite material. The present invention is
14 designed to receive and dispense conventional spools **12** of elongate material surrounding a
15 core. The spool **12** may be comprised of other structures not illustrated in the drawings.

16

17

18 The prongs **50** receive and rotatably support a spool **12** as shown in Figures 3 and 4
19 of the drawings. The prongs **50** have a main portion positioned inwardly from the flanges
20 **53, 55** that have a width smaller than the inner diameter of the core of the spool **12** to allow
21 for rotation of the spool **12** about the prongs **50** as shown in Figure 5 of the drawings.

22

23 The base of the prongs **50** preferably has a prong slot **56** extending away from the
24 first prong **52** and the second prong **54**. The prong slot **56** is formed for receiving a portion
25 of the main body **20** as shown in Figures 1, 2 and 4 of the drawings. A pair of engaging
26 nubs **58** extend inwardly within the prong slot **56** to catchably engage the catch members
27 **24** of the main body **20**.

28

1 The distal ends of each of the first prong **52** and the second prong **54** have tapered
2 flanges **53**, **55** for retaining the spool **12** of material upon the prongs **50** as shown in
3 Figures 1 through 7 of the drawings. The first flange **53** and the second flange **55** are
4 preferably tapered to allow for easy loading of the spool **12**.

5

6 The first prong **52** has at least a first flange **53** extending outwardly from the distal
7 portion thereof as best shown in Figure 7 of the drawings. The first flange **53** has a first
8 edge **57** that is in opposition to the spool **12** and sometimes engages the spool **12** during
9 dispensing of elongate material. The flanges **53**, **55** are preferably a sufficient distance
10 from the spool **12** to avoid constant frictional engagement with the spool **12** during
11 dispensing.

12

13 The second prong **54** has at least a second flange **55** extending outwardly from the
14 distal portion thereof as best shown in Figure 7 of the drawings. The second flange **55** has
15 a second edge **59** that is in opposition to the spool **12** and sometimes engages the spool **12**
16 during dispensing of the elongate material. The flanges **53**, **55** may have various structures
17 commonly utilized for flange structures. The width measured from the outer portions of
18 the flanges **53**, **55** is larger than an inner diameter of the core of the spool **12** thereby
19 preventing the spool **12** from accidentally being removed from the prongs **50** as shown in
20 Figure 3 of the drawings.

21

22 One or more engaging members **60** are attached to the prongs **50** as shown in
23 Figures 2 and 7 of the drawings. The engaging members **60** are for selectively
24 engaging the distal portion of elongate material on a spool **12** to prevent accidental
25 dispensing of the elongate material from the spool **12**. The engaging members **60** may
26 have various structures capable of frictionally retaining the elongate material between
27 thereof and the prongs **50**. One or more engaging members **60** may also be attached to
28 the main body **20** or the support member **30** also.

29

1 Figures 8 through 13 illustrate a first alternative embodiment which is similar
2 to the main embodiment except that the main slot 22 within the main body 20 is
3 reversed and the prongs 50 do not have a slot. Figure 11 best illustrates the position of
4 the catch members 24 within the main slot 22 of the main body 20. The engaging nubs
5 58 within the prongs 50 correspondingly match to the catch members 24 as shown in
6 Figure 11 of the drawings.

7

8 Figures 14 and 15 illustrate a second alternative embodiment where the prongs
9 50 are integrally formed or permanently attached to the support member 30. The
10 prongs 50 may be positioned in a vertical, horizontal or other angled position.

11

12 In use, the user retrieves a desired spool 12 and then positions the spool 12 about
13 the distal ends of the prongs 50. The user then forces the core of the spool 12 upon the
14 distal ends of the prongs 50 thereby causing the tapered flanges 53, 55 to engage the inner
15 core of the spool 12. The distal portions of the prongs 50 are thereby forced inwardly
16 toward one another until the inner core of the spool 12 passes the extended most portion of
17 the flanges. The user continues to apply a force upon the spool 12 until fully positioned
18 about the prongs 50 as shown in Figure 3 of the drawings.

19

20 After the outer edge of the spool 12 passes over the first edge 57 and the second
21 edge 59 of the flanges 53, 55, the prongs 50 are free to expand outwardly to substantially
22 their original position thereby securing the spool 12 upon the prongs 50. The user is then
23 free to dispense or load the elongate material as desired by the rotation of the spool 12
24 about the prongs 50. The user may sever the elongate material by using the cutting edge 32
25 within the support member 30.

26

27 When the user desires to replace the existing spool 12, the user grasps the distal
28 portions of the prongs 50 and applies an inward contracting force upon thereof thereby
29 contracting the prongs 50. When the flanges 53, 55 are able to be passed about by the core

1 of the spool 12 spool 12, the user then simultaneously forces the spool 12 outwardly over
2 the prongs 50 until completely removed. The user then repeats the above process to
3 position the new spool 12 upon the prongs 50.

4

5 What has been described and illustrated herein is a preferred embodiment of the
6 invention along with some of its variations. The terms, descriptions and figures used
7 herein are set forth by way of illustration only and are not meant as limitations. Those
8 skilled in the art will recognize that many variations are possible within the spirit and
9 scope of the invention, which is intended to be defined by the following claims (and
10 their equivalents) in which all terms are meant in their broadest reasonable sense
11 unless otherwise indicated. Any headings utilized within the description are for
12 convenience only and have no legal or limiting effect.